



DC COMPONENTS CO., LTD.

INTEGRATED CIRCUIT

DE7805
DE7805A

TECHNICAL SPECIFICATIONS OF 3-TERMINAL POSITIVE VOLTAGE REGULATOR

Description

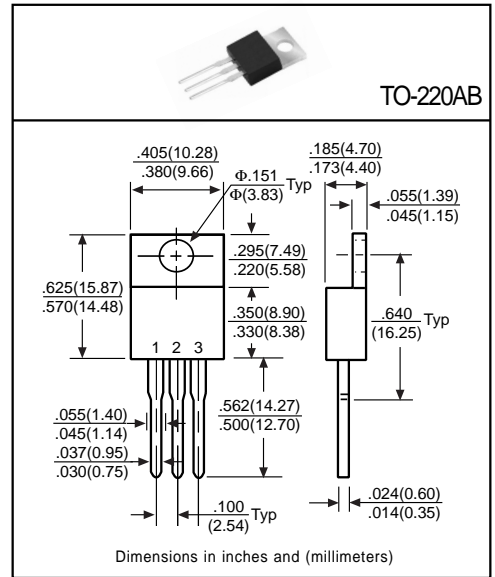
These regulators employ internal current limiting and thermal shutdown, making them essentially indestructible. They can deliver over 1A output current with adequate heatsinking. They are intended as fixed voltage regulators in a wide range of applications including local, on-card regulation for elimination of noise and distribution problems associated with single-point regulation.

Pinning

- 1 = Input
- 2 = Ground
- 3 = Output

Absolute Maximum Ratings (T_A=25°C)

Characteristic	Symbol	Rating	Unit
Input Voltage	V _I	35	V
Total Power Dissipation	P _D	Internal limit	W
Operating Temperature Range	T _{opr}	0 to +125	°C
Maximum Junction Temperature	T _J	125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C
Lead Temperature(Soldering 10 Sec.)	T _L	230	°C



Electrical Characteristics

(V_{in}=10V, I_{out}=500mA, 0°C ≤ T_J ≤ 125°C, unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions	
Output Voltage	DE7805A	V _O	4.85	5.00	5.15	V	T _J =25°C P _D ≤ 15W, 5mA ≤ I _O ≤ 1A
	DE7805		4.80	5.00	5.20		
	DE7805A		4.85	5.00	5.15		
	DE7805		4.75	5.00	5.25		
Line Regulation	DE7805A	Reg _{line}	-	4.0	50	mV	T _J =25°C, 7V ≤ V _{in} ≤ 25V T _J =25°C, 8V ≤ V _{in} ≤ 25V
	DE7805		-	4.0	100		
	DE7805A		-	1.6	25		
	DE7805		-	1.6	50		
Load Regulation	Reg _{load}	-	-	100	mV	T _J =25°C, 5mA ≤ I _O ≤ 1.5A T _J =25°C, 250mA ≤ I _O ≤ 750mA	
		-	-	50			
Input Bias Current	I _{IB}	-	5.5	8.0	mA	T _J =25°C, I _O ≤ 1A	
Input Bias Current Change	ΔI _{IB}	-	-	0.5	mA	5mA ≤ I _O ≤ 1A 7V ≤ V _{in} ≤ 25V	
		-	-	1.3			
Output Noise Voltage	DE7805A	V _n	-	40	200	μV	T _A =25°C, 10Hz ≤ f ≤ 100KHz
	DE7805		-	100	300		
Ripple Rejection	DE7805A	RR	-	68	-	dB	8V ≤ V _{in} ≤ 18V, f=120Hz
	DE7805		62	73	-		
Dropout Voltage	DE7805A	V _D	-	2.0	-	V	T _J =25°C, I _O =1A
	DE7805		-	2.5	-		
Short Circuit Current	I _{SC}	-	1.5	-	A	T _J =25°C	
Peak Output Current	I _{max}	1.7	-	-	A	T _J =25°C	
Average T _c of V _{out}	ΔV _O / ΔT	-	-0.8	-	mV / °C	0°C ≤ T _J ≤ +125°C, I _O =5mA	